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Supervised practice in vocational agriculture in Iowa

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SUPERVISED PRACTICE IN VOCATIONAL AGRICULTURE IN IOWA

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SUMMARY AND CONCLUSION

The national vocational education act of 1917, commonly known as the Smith-Hughes Act, under the provisions of which instruction in vocational agriculture was established in the schools of the United States, makes supervised farm practice a mandatory part of the approved program. This bulletin presents the findings of an investigation, the major purposes of which were (1) to identify the chief factors which apparently contribute to the success of the more effective programs of supervised farm practice now in existence in Iowa and (2) to ascertain the methods employed by the instructors in the development and maintenance of their programs.

Twenty-four of the 128 high schools in Iowa, offering courses in vocational agriculture during the school year 1937-38, were selected because of the relatively high quality of their supervised farming programs. The specific techniques employed by the instructors in these selected schools in the organization and supervision of their respective supervised farm-practice programs were investigated in considerable detail.

The more important findings may be summarized as follows:

1. Three of the four commonly recognized types of supervised farming practice are represented in the programs of the 24 departments investigated, i. e., the productive enterprise project, the improvement project and the supplementary farm practice. The fourth type, placement for farm experience, is apparently non-existent in these programs.

2. Seventeen objectives of supervised farming programs were scored as to their relative importance by the teachers of vocational agriculture in the departments investigated. The five receiving the highest scores were, in order: (a) To establish boys in farming; (b) to improve farming methods used on the individual home farm and in the community as a whole; (c) to develop an interest in farming as an occupation; (d) to provide a means of earning for the boys; (e) to develop methods of economical production.

3. The boys' own parents constituted the greatest single source of the financial aid required in getting the projects established. Slightly over 50 percent of the projects were financed by the parents, mainly by direct loans; in 30 percent of the cases, the boys' own capital sufficed.

4. Twenty-three of the 24 departments of vocational agri-

culture included in the investigation had Future Farmer chapters. In the majority of cases, these chapters carried on a number of activities designed to promote the supervised farm-practice programs.

5. The instructors investigated seemed to consider the intelligent cooperation of the parents of their students an important factor in the success of supervised farm-practice programs, as they reported several distinct methods which they employ to create the correct parental attitude toward the work.

6. Only 51 percent of the boys involved in the investigation exercised complete control over the management of their respective productive projects.

7. In 56 percent of the cases, the practices employed in the management of the home projects were appreciably different from those in current use on the home farms.

8. Long-time planning of the supervised farm programs is essential, or at least highly desirable, if the objective "establishment in farming" is to be realized. However, it was the common practice in the departments investigated to revise these long-time plans each year, as the program developed.

9. The instructors in the departments investigated made frequent use of class time and activities in planning and promoting the supervised farming programs of their students.

10. The purposes for which the instructors most frequently visited the boys on their home farms were as follows: (a) To encourage the boy and increase his interest; (b) to teach some important principle or technique; (c) to assist with the discovery and solution of problems encountered; (d) to check upon methods being used in the projects.

11. The practices most frequently employed by instructors to develop and maintain interest in supervised farming programs were as follows: (a) Project tours; (b) showing at fairs; (c) promotion through ranks of Future Farmer chapters; (d) news items in local papers.

12. Considerable cooperative action in the marketing of products of the home projects, in the buying of seed and breeding stock and also in their production, was reported in the 24 departments investigated. The majority of these cooperative activities were in connection with the production of hogs, the growing of hybrid seed corn and the purchase of minerals and seed potatoes.

Supervised Practice in Vocational Agriculture in Iowa[1]

By Harvey Paul Sweany and J. A. Starrak[2]

Instruction in vocational agriculture in the secondary schools of the state is carried on under the provisions of federal legislation, embodied in national vocational education acts. The first of these acts, popularly known as the Smith-Hughes Act, was passed in 1917 and is still in force. The latest, the George Dean Act, which increases substantially the amount of the federal subsidy provided in the act of 1917 and extends its provisions to include additional vocations, became operative in 1938.

Because of its comparative newness, the program in vocational agriculture is not generally well understood or appreciated except in communities where the work has been carried on successfully for a number of years. Attempts to acquaint the general public with the program have been scattered and sporadic, with the result that the current ideas concerning it have been acquired by hearsay or long-range observation and consequently are not always accurate or adequate.

SUPERVISED FARM PRACTICE

Perhaps as little understood and appreciated as any phase of the current program of vocational agriculture is that known as supervised farm practices. The Smith-Hughes Act makes definite mandatory provisions for this part of the program. Section 10 of the Act reads, ". . . that such schools shall provide for directed or supervised practice in agriculture, either on a farm provided for by the school or other farm, for at least 6 months per year. . ." Two requirements, therefore, must be met if the school is to be reimbursed for its supervised practice program: (1) Supervised practice must be carried on upon a farm; and (2) it must cover a period of at least 6 months each year.

The earlier forms of supervised farm practice may have satisfied the letter of the law, but there is little doubt that they fell far short of the spirit of it, as expressed in the ideals and objectives of those educators who assisted in the writing of the

[1] Project 596 of the Iowa Agricultural Experiment Station.
[2] Mr. Sweany was research graduate assistant and Mr. Starrak is professor in the department of vocational education.

Act. In these beginning years the typical farm-practice program of the individual boy was quite narrow, usually limited to one production project, often a very small one, per year with no continuity of enterprises from year to year as he progressed through his high school course.

In more recent years the trend has been in the direction of individualized farming programs, diversified in character and comprising various integrated enterprises carried over a period of several years. In the effective management of this preferred form of supervised farm practice, there is a deliberate and carefully planned effort to improve the quality of the products, to increase the scope of the various enterprises, to integrate the different enterprises into a comprehensive program and finally, to lead to the establishment of the boy as an independent farm operator.

A few of the leaders in vocational agriculture believe that the term "supervised farm practice" should be extended to include Future Farmer activities, community service projects and other class projects not conducted on a farm. But such an extension of meaning has not been generally accepted, and in this bulletin the application of the term is restricted to the four types recognized and advocated by leaders in agricultural education. They are defined in the standard Iowa Supervised Farm Practice Report form, as follows:

"Productive enterprise project: A business venture in a farm enterprise for profit, usually limited to a production cycle. It is usually owned, managed and operated by the student.

"Improvement project: A project intended to increase appreciably the real estate value of the farm, or to improve the efficiency of a farm enterprise. It is usually of greater scope than a 'job' or an 'improved practice', e. g., improving the swine enterprise, beautifying the farmstead, keeping a set of farm accounts. It is usually managed and operated by the student.

"Supplementary farm practice: Practice which has as its purpose development of ability in certain jobs and practices carefully selected by the teacher in conference with the student. These jobs or practices are more restricted in scope than improvement projects. Examples: Culling the poultry flock; treating oats for smut; dipping sheep.

"Placement for farm experience: Placement on a farm of a student who is lacking in farm experience or transfer to a suitable farm of a student who has too limited facilities on his home farm. The placement of such students on farms and the follow up of their programs on these farms is one responsibility of the teacher of agriculture."

A truly comprehensive supervised farm-practice program

is supposed to include all four types described above. In Iowa some instructors of vocational agriculture have approached this ideal much more closely than others. Productive enterprise projects have been emphasized as the approved form of supervised practice since the inception of the program in 1917 and hence are the most common type. A few Iowa instructors have encouraged their students to undertake other types of supervised practices, but accurate records on them prior to 1936 are not available. During recent years, however, the programs of the annual state and district conferences of agriculture instructors have placed emphasis upon the development of comprehensive individual supervised programs, designed to include all four types of supervised practices. As a result comprehensive farm-practice programs involving the first three of the types listed above are becoming more common, although only a few instructors have been able to enroll 100 percent of their students in all of them. A larger number have been successful in enrolling a small percentage of their students in all three types of projects, while a still larger number have done nothing more in this direction than to meet the minimum legal requirement of productive projects only.

THE CONDUCT OF THE INVESTIGATION

An investigation was undertaken to determine (1) the part which certain selected factors play in the development of successful supervised farm-practice programs and (2) the techniques employed by instructors in implementing them. The general procedure followed was to investigate the methods and techniques employed by instructors with outstanding supervised programs.

In selecting the instructors whose supervised practice programs were to be investigated, a criterion made up of the two factors suggested in the preceding section was employed. These two factors were: (1) The percentage of agriculture students carrying three types of supervised practice and (2) the number of projects and practices per boy.

This standard was applied to the 1937-38 preliminary reports made by the instructors of vocational agriculture to the State Department of Public Instruction, and 26 instructors, whose supervised farm-practice programs seemed to rate highest, were identified. Two of those chosen failed to cooperate,

leaving 24 whose supervised farming programs were investigated in detail. In these 24 departments, 100 percent of the boys enrolled in the vocational agriculture curriculum were carrying productive projects, 81 percent improvement projects and 83 percent supplementary practices. These averages are much higher than corresponding ones for the other 104 schools in Iowa which offered vocational agriculture during 1937-38.

Further investigation of the supervised practice program of these 24 departments was conducted by means of a questionnaire sent to each of the teachers, asking for information on the following 10 items[3]:

1. The objectives of supervised farm practice held by the instructor.
2. The ownership and management of the productive projects by the boy.
3. The activities of the Future Farmer chapter in supervised practice.
4. The active parental participation and cooperation in the direction of the supervised farming program.
5. The long-time program for each boy which serves as a foundation for the current year's program.
6. The type and amount of supervision that is given the farm-practice program.
7. The effect of the class work in vocational agriculture upon the supervised farm-practice program.
8. The means of developing and maintaining interest of the boys in their supervised practice programs.
9. The cooperative activities that tie the boys' individual programs together.
10. The farm experience and background of the vocational agriculture instructors.

In addition to the circulation of the questionnaire, the investigator made personal visits to four of the schools in order to obtain information which might supplement that gained through the use of the questionnaire and serve as a check upon its accuracy. On these visits, representatives from the following groups were interviewed by the writer: (1) Boys currently enrolled in the vocational agriculture curriculum, (2) their parents, (3) ex-students of vocational agriculture who had become established in farming for themselves, (4) the superintendent of schools and the principal of the high school, (5) the bankers with whom many of the boys did business.

[3] These were chosen on the basis of the writers' experiences in teaching vocational agriculture, supplemented by advice given them by members of the Vocational Education Department of Iowa State College and by the supervisors of vocational agriculture in the State of Iowa.

FACTORS CONTRIBUTING TO THE DEVELOPMENT OF SUPERIOR FARM-PRACTICE PROGRAMS

In the following pages the most significant findings of the investigation are briefly reviewed.

THE OBJECTIVES OF THE SUPERVISED FARM PRACTICE

The judgments of the 24 instructors were obtained on the relative importance of each of 17 suggested objectives to be achieved by supervised farm practice. A simple scale with values ranging from one to five was used. In table 1 are listed the objectives arranged in the descending order of importance, with the numerical values of the ratings given by the 24 instructors. Following the table, those objectives which secured relatively high ratings are briefly discussed.

To Establish Boys in Farming

The establishment of the student of vocational agriculture in farming for himself recently has been much emphasized by progressive leaders in agricultural education as an important objective of the program of vocational agriculture in secondary schools. That the supervised farm-practice program can be

TABLE 1. RATINGS OF OBJECTIVES FOR THEIR SUPERVISED FARMING PROGRAMS BY THE INSTRUCTORS IN 24 IOWA VOCATIONAL AGRICULTURE DEPARTMENTS.

Objectives	Scorings*					Tabulated score total
	5	4	3	2	1	
To establish boys in farming	16	5	2	1	0	108
To improve farming methods used on the individual home farm and in the community as a whole	13	9	2	0	0	107
To develop an interest in farming as an occupation	13	8	2	1	0	105
To provide a means of earning for the farm boy	8	10	6	0	0	98
To develop methods of economical production	7	12	4	1	0	97
To contribute to improve living conditions on the farm home	9	8	4	2	1	94
To develop managerial abilities to balance manipulative abilities normally learned on the farm	8	10	3	2	1	94
To contribute to the efficiency of the farm business as a whole	6	11	5	2	0	93
To help increase the boy's interest in class work	7	9	5	3	0	92
To develop the ability to market farm products advantageously	5	10	9	0	0	92
To use as a teaching situation	6	7	8	2	1	87
To develop cooperative activities	4	10	4	5	1	83
To help the farm boy find the type of farming in which he has the greatest ability	6	5	6	7	0	82
To try out experiments in production methods to determine correct procedure	0	6	10	4	4	66
To test classroom teaching	1	3	9	8	3	63
To satisfy state and national requirements	0	0	4	11	9	43
To help the teacher get experience in farming	1	0	1	4	18	34

* Key: Dominant 5
Developed to a marked degree 4
Apparent but not outstanding 3
Indirect results but not emphasized 2
No evidence of its being used 1

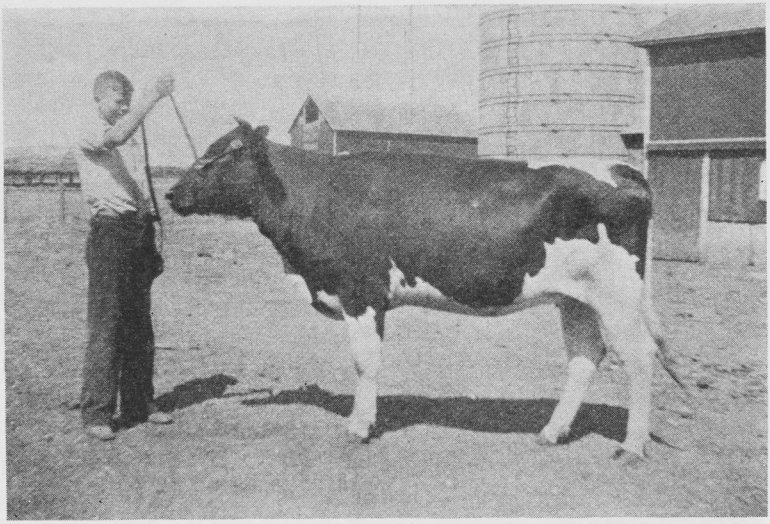

Fig. 1. Dairy projects such as this require long-time planning.

employed to contribute toward the achievement of this objective has been amply demonstrated in the experience of many students of vocational agriculture who, beginning with small productive projects in their freshman year of high school, gradually expanded them into major enterprises in their own independent farming operations after graduation. In addition, some boys have used the earnings from their first projects to finance the development of other productive projects which in turn have later developed into major enterprises on their independently operated farms.

In some cases a boy's productive projects have been merged into the corresponding enterprises of the home farm by a partnership agreement with his father, in which the boy often has assumed responsibility for the management of the entire farm enterprise. It is obvious that supervised programs of this type need to be planned and developed over a period of several years; hence, they are usually referred to as long-time projects or programs.

A good example of a long-time project is the establishment of a dairy herd, using a purebred heifer as foundation stock. Evidently such a project must be carried on several years before a herd of producing animals is acquired.

To Improve Farming Methods Used on the Home Farm and in the Community as a Whole

This was rated a very close second to establishment in farming as an objective of supervised farm practice. Since the most approved practices and techniques are employed by the boy in his productive projects, under the supervision of his instructor, the superiority of his product over that of the home farm and of the community should be, and in many actual cases has been, great enough to provide an effective object lesson to his father and neighbors. General adoption of these demonstrated practices usually occurs on the home farm first and then spreads to other farms.

Demonstration projects also have been employed specifically for this purpose. Such projects are planned to be demonstration projects for the whole community. The potato project pictured in fig. 2 is a good example of this type of project. In this case, of course, the project was also a source of income for the boy.

To Develop an Interest in Farming as a Life Occupation

The development of interest in farming was ranked third by the instructors, while the majority of parents interviewed evidently regarded it as the most important, since they usually mentioned it first when asked what they believed the chief objectives of the supervised farm practice were.

This influence was thought to be especially effective and desirable in the case of farm boys attending high school in towns or small cities. Many parents expressed the belief that the boy was less likely to lose interest in the farm and be

Fig. 2. A vocational agriculture student demonstrates how to grow potatoes correctlv in his community.

weaned away from it if he owned some of the stock and shared in the income therefrom, than if he obtained part-time work in the town while attending high school. The size of the investment and the amount earned were not thought to be as important as the fact of ownership by the boy and the certainty of receiving for himself a share of the returns.

To Provide for the Farm Boy a Means of Earning Spending Money

In giving this objective a rather high rating, the instructors appreciated the strength of the appeal which the opportunity to earn money makes to the normal boy, but they saw in it something else. Carrying a farm project involves spending money as well as receiving it, and the ability to use money wisely is often more important and more difficult to acquire than the ability to earn it. A thoughtful appreciation of the value of money is one important factor in its wise expenditure, and money earned through some farm venture is likely to be appreciated because of the hard work and constant care involved.

The expenditure of money on a farm project also involves a careful evaluation of the things to be purchased, and a prediction of their contribution to the success of the whole venture. Moreover, as the project progresses, the soundness of such evaluation and prediction is clearly demonstrated.

The value of productive projects as a training in business methods may be lessened or dissipated entirely by the behavior of parents, who in their eagerness to help the boy make a financial success of the project, provide feed, housing and other factors of production free of charge. It is probably better business training to lose money on a project and to be aware of the loss, than to experience loss and still think it has been a success. If the success of a project is measured by what the owner learns from it, one in which a boy loses money may be more successful than one which yields a monetary profit.

To Contribute to Improved Living Conditions on the Home Farm

Another highly commended objective to be achieved through a comprehensive farm-project program is the improvement of living conditions on the boy's home farm. This objective is usually attempted by means of improvement projects which

Fig. 3. A vocational agriculture student improving the appearance of the home farm by mowing fence rows.

the boy may initiate on his home farm. The improvement of the barnyard layout, the beautification and modernization of the farm home, the control of weeds and the repair of buildings and fences are activities which suggest many different types of improvement projects.

To Develop Managerial Ability

This objective was regarded by the instructors as equal in importance to the one immediately preceding. The average farm boy who does his share of the routine work on a farm soon acquires the various manipulative abilities involved in the operation of a farm, but he is not usually given much experience in making decisions and plans involved in the management of the regular farm enterprises. The supervised farm-project program, if properly directed by the instructor, provides these managerial experiences, since upon the boy will be placed almost full responsibility for planning and developing his program. Some improvement in the current practice in this regard would seem to be desired, since even in the departments investigated, only 51 percent of the boys were permitted to make all the decisions involved in the management of their respective productive projects. Quite obviously, if the objective in question is to be achieved, the boy must be given

the opportunity to make decisions on problems encountered in his farming program and to observe the results of the decisions he makes.

To Contribute to the Efficiency of the Home Farm Business

Increasing the efficiency of the home farm as a business came next in the list of important objectives to be achieved through supervised practice. Instructors emphasizing this objective have evidently accepted the rapidly growing idea that the responsibility of the instructor of vocational agriculture does not begin or end with the education of the boys of the community who happen to be enrolled in his classes but rather extends to adult farmers and their problems.

There are on record numerous cases in which all the farming practices on the home farm have been greatly improved through the influence of the boy's home-project program. One would expect this influence upon the father's practices to be quite closely correlated with the extent of his genuine interest and active cooperation in the boy's program.

To Increase the Boy's Interest in His Regular School Work

The supervised farm-practice program is used by many instructors to increase the interest of the boys in their regular classroom work in agriculture. The boys are encouraged to report to the class the problems which are encountered in the management of their projects. Some few of these problems may be very specific and apply only to the conditions faced by one boy, but many are likely to be typical of those met by all the boys, and so may profitably be made the subject of investigation and discussion by the whole class. When all members of the class are carrying projects in the same farming enterprise, the common problems encountered may constitute a considerable portion of the agriculture course.

Instructors were found to vary greatly in the extent to which they employ the home projects to motivate the class work. In some schools the supervised farming programs are so unrelated to the classroom instruction in agriculture that it is difficult to realize that they have the same objectives as the latter and are part of the same program. In schools where the supervised programs are rather extensive, nearly half of the problems used in the class work are those encountered in the

home projects. One instructor of the 24 reported that 90 percent of the class problems he employed came from the boys' supervised farming programs. Some progressive leaders in agricultural education advocate basing the class instruction entirely upon the problems encountered in the home projects of the boys in the class, disregarding the systematic, logical presentation of the important fact material involved. They argue that actual problems encountered by one or more of the boys in the class are more challenging and worth-while to the boys involved, and also to the other boys in the class, than are imaginary problems or reading assignments on some general topic, especially if those problems chosen for class work are so typical of real life situations that all the boys can readily anticipate meeting them, if they have not already done so. While the point of view expressed above is doubtless sound, it does not of itself render unnecessary or undesirable the logical organization of subject matter.

To Develop Cooperative Attitudes and Activities

This objective is stressed by many instructors who have been able to initiate projects which involve cooperative activity by the boys in their classes and which supplement their individual projects. The majority of such cooperative projects are marketing ventures in buying seed or stock for the individual projects of the members and in selling the produce from the same. The types of cooperative activities carried on in the supervised farm practices of the 24 departments investigated, along with the number of instructors employing each of them, are described in more detail in a later section of this report. (See page 18.)

OWNERSHIP AND MANAGEMENT PRACTICES OF THE PRODUCTIVE PROJECT

Sources of Financial Capital for Projects

Of the problems encountered in supervised farm practice, those having to do with the financing of the individual projects are often most difficult to solve, especially in the cases where the economic resources of the boy's family are meager, since it is not often easy to obtain adequate credit for financing productive projects of minors.

Of the 957 boys carrying projects, 288, or 30.1 percent, used capital of their own for the purchase of seed and livestock,

TABLE 2. SOURCES OF LOANS AND THE USE MADE OF THEM BY BOYS IN 24 IOWA VOCATIONAL AGRICULTURE DEPARTMENTS.*

Sources of loan	Number of boys financing the purchase of seed and livestock		Number of boys financing the purchase of feed and supplies	
	Number	Percent	Number	Percent
Parents	377	39.3	460	48.1
Share basis, usually with parents	127	13.3	118	12.3
Production Credit Association	74	7.7	0	0
Bank	52	5.4	21	2.2
Relative	29	3.0	17	1.8
Teacher	14	1.5	4	0.4
Friend	9	0.9	6	0.6
Future Farmers chapter	1	0.1	1	0.1

*Total number of different boys was 957.

while 203, or 21.2 percent, purchased the necessary feed and supplies with their own money. The remainder had to borrow the required capital. The sources of loans made to individual boys in the 24 agricultural departments are shown in table 2.

It will be observed that parents provided the source of more loans than any other agency, both for the purchase of livestock and seed and also for feed and supplies, accounting for 39.3 and 48.1 percent, respectively, of the total number of loans. Parents doubtless also assisted in providing capital for many of the 127 boys operating on the share basis. In addition, a number of instructors indicated that the boys in some instances used feed from their fathers' supplies, paying for it when their projects were completed. No mention was made of interest being charged.

It will be noted that the Production Credit Association was used by 74, or 7.7 percent, of the boys, but only for the purchase of seed and livestock. Loans from banks were obtained by only 5.4 percent of the boys and mainly for the purchase of seed and livestock.

The relatively small number of boys, 1.5 percent, who obtained loans from their teachers were probably those who could not obtain capital from any other source.

A few instructors reported that while loans from their Future Farmer chapters were available, none was being used by their boys during the current year.

In 14 of the 24 departments, some of the loans were obtained

by the boys on a cooperative basis in the form of one "master" loan, amounting to all the individual loans. The local banks provided the capital for these cooperative loans, while in five others the Production Credit Association performed a like function.

Management Practices

The instructors were asked to report an estimate of the percentage of the productive projects under their supervision in which the management practices followed were appreciably different from those employed in similar enterprises of the home farm and also the percentage of the boys who were permitted to exercise full control over the management of their respective productive projects.

The reports indicated that in the management of 56 percent of the productive projects, practices were employed which differed appreciably from those followed in similar enterprises on the home farm. In only 51 percent of the projects were the boys permitted to exercise full control of the management of their projects.

If the development of managerial ability is to be regarded as a highly important and desirable objective of the supervised farming program, it would seem that the current practices in this connection leave much to be desired. It is obvious that one cannot learn to become proficient in the performance of any complex ability without the actual experience of performing it in the proper manner several times.

A closely related aspect of this problem of parental participation in management of productive enterprises is the extent to which productive projects grow into partnerships with the father on the home farm as a step toward the boy's establishment in farming. These 24 instructors were asked to estimate the percentage of boys, over a period of 3 years, that had entered into partnerships with their fathers as a result of productive projects. The replies indicated that in the average department of the 24 investigated, 14 percent of the boys were establishing partnerships with their fathers. The largest percentage reported for any one department was 40 percent.

ACTIVITIES OF THE FUTURE FARMER CHAPTERS IN SUPERVISED PRACTICE

Twenty-two of the twenty-four departments investigated supplied information on the part which Future Farmer chap-

TABLE 3. ACTIVITIES OF THE FUTURE FARMER CHAPTERS IN SUPERVISED PRACTICE OF 22 DEPARTMENTS OF VOCATIONAL AGRICULTURE.

Activities	Number of departments
Devotes some of its meetings to the discussion of productive-project programs	20
Sends articles to the Iowa Future Farmers of America magazine	19
Follows the minimum project requirement for advancement in rank in the local Future Farmers of America chapter	19
Takes ictures of productive projects for display	18
Holds a F. F. A.-parent meeting to discuss supervised practices	14
Publishes a F. F. A. news letter	11
Sets up goals for labor income of productive projects	9
Encourages productive projects by providing livestock or crops to rotate among needy boys	4

ters played in the supervision of home projects. The activities reported are summarized in table 3.

In addition to the activities listed in table 3, it appears that in an indeterminate number of departments the Future Farmer chapters sponsor contests designed to improve supervised farming programs. The following contests, with prizes given, were reported:

1. Cup given to boy with best project program.
2. Thermometer and score sheet are kept on births of livestock.
3. Cash prize for best project and record book.
4. Cooperative creamery gives silver cup to outstanding boy in department, 50 percent based on supervised practice.
5. Junior corn show.
6. Free trip to Veishea for best program.
7. Sow testing.
8. Corn-yield test.
9. Mineral sales campaign.

On this point, three instructors volunteered the opinion that we now have too many contests and that contests do not add anything to the effectiveness of the supervised farming program.

ACTIVE PARENTAL PARTICIPATION AND COOPERATION IN THE DIRECTION OF THE SUPERVISED FARMING PROGRAM

In vocational agriculture, the school comes to the farm home for the purpose of obtaining its cooperation in teaching the boy through participation in real life problems encountered in his supervised farming program or in the farm business as a whole or in both.

For many reasons it is highly desirable that the active interest and intelligent cooperation of the parents be obtained in order to insure the development of a satisfactory supervised practice program for the boy. In the first place the instructor cannot give the boy's project work as close supervision as can the parents. Care must be taken, however, to insure that the parents work with the teacher to see that the boy carries out his own plans rather than work with the boy to carry out the recommendations that may be made by the teacher. In other words, the parent should become co-supervisor.

In the second place it is desirable that the parents approve the long-time program and production plans before they are finally adopted, since they may call for considerable adjustment of the whole farm program as they develop. Usually the boy is held responsible for obtaining this approval, but the instructor verifies it.

A third reason why the obtaining of parental cooperation is desirable is that parents assist in financing the boy's project in the majority of cases. This assistance is often essential because of the difficulties encountered by minors in obtaining credit. Parents, however, must understand as thoroughly as possible the educational principles involved in the supervised practice program, if their assistance in this direction is to do more good than harm. Uninitiated parents often think that helping their boys financially means giving them outright money, feed and equipment, and are inclined to be much too lenient in money matters, thus depriving the boys of the full benefit of the business experiences involved in the management of their projects. In fact, some are likely to think that they will be regarded as non-cooperative and uninterested if they do not give outright to their boys the money and equipment needed. The wise instructor will take steps to insure that parents are disillusioned in this regard as early as possible and are made to realize that the real purpose of the supervised farming program is to educate the boy, not to make money for him.

A fourth reason for obtaining the interest and cooperation of the parents has been emphasized by certain instructors. In order that the productive projects undertaken by the boy may grow into a long-time life farming program, these instructors encourage a partnership between father and son in

the particular enterprise which the boy has chosen for his project. Under the partnership agreement, the boy owns a percentage of the enterprise and gradually takes over the active management of the whole enterprise on the farm. Such an arrangement, of course, enlarges greatly the experience of the boy and increases his opportunity to improve his productive methods and in addition may help to make his particular enterprise of the home farm more profitable.

Means for Securing the Interest and Cooperation of Parents

The 24 instructors in the departments investigated reported the use of the following means for securing the active interest and intelligent cooperation of parents in the supervised farming programs of their boys:

1. Showing of productive projects at fairs. These fairs may be community, district or state in scope. Some have found exhibits placed in the school to be quite effective.

2. Published accounts of outstanding productive project programs in the local newspapers and school journals.

3. Discussion of supervised practice at meetings of parents and sons. These meetings often take the form of the annual father-son banquet which is becoming quite popular, or a special meeting may be called wholly or partly for the purpose of discussing supervised farm-practice programs. In some cases the parents alone are invited to attend. In meetings of this type, the objectives of supervised practice are systematically discussed. Policies for the supervision of projects are agreed upon, and more uniformity results in the way projects are financed, in the types of projects and in the standards or goals for the supervised practice. The meetings for parents should never supplant the visits of the instructor to the home farms of the boys but should rather be used to supplement such visits.

4. Inspection tours for the parents. These tours usually are devoted to an inspection of the best project programs of the boys in the community.

5. Cultivation of the good will of parents when visiting the boys' home farms. On these occasions the successful teachers show genuine interest in the welfare of the boy and stress the educational benefits of the project. In this connection accurate accounts of the outstanding accomplishments of other

boys in project work can be made effective. The opportunity presented to benefit the whole community also should be stressed.

In addition to the various rather formal or systematic efforts to develop and maintain the interest and cooperation of parents in the supervised farm-practice programs the instructors take advantage of every opportunity to inject the topic into casual conversation with parents as they meet them on the street, in places of business, at meetings and at any time when they come in contact with the parents.

LONG-TIME PROGRAMS FOR EACH BOY THAT SERVE AS A FOUNDATION FOR THE CURRENT YEAR'S PROGRAM

Comprehensive, supervised farming programs are those which involve a variety of home projects, planned for and carried on over a number of years. The end objective of such a program is the establishment of the boy as an independent farmer as a result of the expansion and integration of the separate projects or enterprises into a broad farming program. The ideal of becoming a successful farmer is thus kept alive in the mind of the boy and serves to motivate the learning of knowledge and abilities, the value of which would not be made so obvious if the program were limited to small, independent, short-lived projects. In addition a long-time program is more apt to lead to partnership in the home farm business than are small, independent, seasonal projects.

The practices and policies followed in the departments investigated, in the development of the long-time programs, are shown in table 4.

TABLE 4. PRACTICES AND POLICIES OF 24 DEPARTMENTS OF VOCATIONAL AGRICULTURE IN REGARD TO THE LONG-TIME FARMING PROGRAM.

Practices and policies	Number of departments
Long-time programs are revised and supplemented each year	24
Foundations are laid for breeding herds and improved varieties of crops are introduced in the selection of productive projects	24
Complete ownership of productive projects is encouraged	23
Partnership arrangements are encouraged as a form of continuation of productive projects	21
Long-time programs are made for each boy during his first year in vocational agriculture	18

It is worthy to note that in all the 24 departments it was found necessary, or at least advisable, to revise the plans for the long-time programs each year. Since in actual-life situations this same need is experienced, it might be regarded as indicative of the real and vital character of the project programs.

The advisability of selecting the animals and seed for the productive projects, with a view to their becoming the foundation stock for the long-time projects, is also quite obvious. Breed lines, rather than individual quality, should receive more emphasis.

It is interesting to note that although the majority of the instructors encourage the development of the productive projects into partnership enterprises with the parents of the boy, more of them are in favor of the complete ownership by the boy of the productive projects which form the initial stages in his long-time program.

Since 25 percent of the instructors do not initiate the long-time program in the first year of the boy's enrollment in the vocational agriculture course, it can hardly be considered essential to do so, although 64 percent of the instructors reported the plans for the long-time program for the beginning vocational agriculture student cover a period of 4 or more years, while the remainder plan for lesser periods. In the case of students who are on the point of graduating from the vocational agriculture course, only 45 percent of the instructors have the boys plan for as much as 4 years ahead. The remainder seem satisfied with plans covering 2 and 3 years.

THE TYPE AND AMOUNT OF SUPERVISION THAT IS GIVEN THE FARM-PRACTICE PROGRAM

The type of supervision which produces superior farm-practice programs involves much more than the mere overseeing of the work on the home farm through visitation by the instructor. Much direction was given by the instructors investigated to the shaping of the program in the classroom during the planning period and later in the solution of problems which arise as the project progresses. The total supervision given to the farm-practice program may, therefore, be thought of as occurring in two places, i. e., in the classroom and on the home farm of the boy.

Supervision Given in the Classroom

It is, perhaps, to be expected that the instructors in schools with superior supervised farming programs connect closely the work of the classroom with the home projects, to the mutual benefit of both phases. This was found to be so in the case of the 24 instructors investigated. In doing so they make use of more than one device or activity. Those most frequently employed are listed in table 5.

It will be noted that most of the practices listed in table 5 have to do with managerial rather than strictly production techniques and because of this would be warmly recommended by leaders in agricultural education.

The class periods in vocational agriculture in the typical school are devoted almost exclusively to teaching production techniques. The managerial phases are introduced quite realistically in the actual planning of the supervised farming programs. Budget estimates are made of possible productive projects to determine the advisability of undertaking them. Record of projects of some years' standing are analyzed in the search for factors which result in gain and loss. The value of accurate records is thus made apparent to the boy, and his ability to keep and interpret records is developed.

Since the boys make their initial plans for their projects before many of the essential principles and techniques have been taken up systematically in class work, the instructors

TABLE 5. PRACTICES EMPLOYED IN PROMOTING THE SUPERVISED FARMING PROGRAMS.

Practices	Number of instructors using practice regularly	Number of instructors using practice occasionally
Boys carry project through production cycle or 1 year	23	0
Boys make production plans before the problem has been met in supervised farming program	19	2
Use class periods for teaching improved practices on home farm	17	2
Boys make budget estimates of the different enterprises to guide selection	17	2
Boys add to their written plans as the project progresses	16	4
Boys make production plans before the material has been studied in class	16	4
Boys analyze completed record book for experience and training	15	0
Use previous boys' projects as a guide in developing supervised farming program	12	3
Keep more complete record of improvement projects and supplementary practices than numbers	12	0

find it necessary to have the boys check upon their project plans periodically, as new ideas are developed, and to make any changes indicated by their newly acquired knowledge. This type of supervision of the home projects reduces the number of farm visitations, and thus results in a more economical use of the instructor's time.

In most of the programs investigated, the instructors use the conference method in implementing the various classroom supervision practices discussed above. These conferences are with the individual boys, or with a small group of boys who happen at the time to be grappling with identical or quite similar problems. On rare occasions a few instructors utilize classroom periods to take the whole class to a farm where a demonstration of a correct practice, which each boy will need to use in his own project, is given.

In addition to the classroom activities listed in table 5, the following practices were suggested by only a few of the instructors:

1. Set aside certain days to discuss home programs.
2. Visit projects in other departments or in the home department.
3. Bring boys from neighboring departments to discuss their supervised farming programs.
4. Develop group projects during the class period.
5. Read the requirements for the State Farmer Degree, and show the plans of boys who have attained that degree.
6. Provide project stories for reading.
7. Use problems of an actual farm of average size for class study.

Home Supervision

The amount of home supervision found necessary to insure superior supervised farming programs seems to vary considerably with the different instructors. When the projects are carefully planned during regular class periods, and when the active interest and intelligent cooperation of the parents are secured by the various means which have been described previously in this report, the amount of home supervision may be materially reduced, and the time spent on the farm by the instructor may be devoted to the closer supervision of the actual work of the project.

The purposes which the instructors in the 24 departments investigated seek to achieve in their visits to the boys' homes are shown in table 6.

TABLE 6. THE PURPOSES TO BE ACHIEVED BY SUPERVISORY VISITS OF THE INSTRUCTORS.

Purposes	Number of instructors
To encourage boys and increase interest	16
To assist with supervised farming problems	15
To check project methods	15
To improve the good will of parents	13
To check records	8
To make new plans	7
To teach skills	4
To assist with adult farmer problems	2
To check students' other activities	1
To take pictures	1
To improve prestige of vocational agriculture in community	1

In achieving these objectives listed in table 6, the instructors employ various practices which are set forth in table 7 along with the frequency of their use. Evidently these successful instructors attempt to make their visits more than mere supervision of the projects under way.

There are very few of the instructors who notify the boys of impending visits in order to insure that they will be at home. Most of them prefer to run the risk of not seeing the boys, due to their possible absence from home, rather than have the boys make special preparations for their coming and thus deceive them as to the normal conditions of the projects. There are also few who leave with the boy a check sheet of recommendations. It would appear that such a sheet would have consid-

TABLE 7. SUPERVISION PRACTICES, OTHER THAN THOSE USED IN CLASS WORK, EMPLOYED BY THE 24 INSTRUCTORS.

Practices	Number of instructors using practices regularly	Number of instructors using practices occasionally
Lead boy to discover his own problems	21	3
Use special conference at school with students having the same project	21	1
Make each visit a teaching situation	18	0
See that each boy's projects are separated from home farm enterprises of the same kind	18	3
Give graduates supervision in their supervised farming program	13	7
Use time of the visit to bring records up to date	13	2
Take boys away from home in summer to teach or demonstrate a new practice	11	0
Plan home visits as one would a lesson	8	3
Notify boy of the day on which visit will be made	5	5
Leave a check sheet of recommendations with the boy	5	0

erable value, especially if compiled with the cooperation of the boy.

THE EFFECT OF THE HIGH SCHOOL PROGRAM IN VOCATIONAL AGRICULTURE UPON THE SUPERVISED FARM PRACTICE

It would appear likely that the character of the regular daily class work in vocational agriculture in the high school would have some influence upon the success of the supervised farm-practice programs of the boys. Two phases of the class work were investigated: (1) The sequence, or placement, of the different subjects in the agricultural curriculum and (2) the emphasis placed upon the systematic study of the problems encountered by the boys in their supervised farming programs.

The sequence of courses and their placement in the 4-year high school curriculum in vocational agriculture is shown in table 8.

TABLE 8. SCHEDULE OF VOCATIONAL AGRICULTURE COURSES IN 24 IOWA HIGH SCHOOLS.

Grades	Farm shop	Farm crops	Animal husbandry	Farm management
IX	9	3	8	0
X	1	11	4	0
IX and X	1	6	6	0
XI	0	0	4	3
XII	2	0	0	4
X and XI, alternating	0	2	1	0
XI and XII, alternating	8	2	1	14
Totals	21	24	24	21

It is apparent that, in spite of the customary practice in Iowa of placing the farm shop course in the ninth grade, there is a decided trend in the 24 departments investigated to replace such courses with courses in farm crops and livestock. This is being done in order that the subject matter taken up in the regular class work may be closely related to the home projects. It is considered desirable for the boys to undertake productive home projects early in their high school careers so that there will be sufficient time before they leave school for the individual productive projects to develop and expand into a broad, comprehensive supervised farming program. It has been found, however, that when productive

TABLE 9. AVERAGE LENGTH OF TIME SPENT IN THE CLASSROOM ON THE SYSTEMATIC STUDY OF THE DIFFERENT PHASES OF THE SUPERVISED FARMING PROGRAM.

Phases of the supervised farming program		Farm shop	Farm crops	Animal husbandry	Farm management
Surveying home farm to determine present status	Average number of days	4.6	4.2	4.0	4.3
	Range in days	1–12	1–10	1–10	1–10
	Number of department reporting	13	18	19	15
Planning individual supervised farming programs. (First planning and later revision of plans to be included here.)	Average number of days	5.7	8.4	9.2	8.0
	Range in days	1–15	1–50	1–50	1–50
	Number of department reporting	14	21	23	16
Budgeting the productive projects	Average number of days	2.5	3.7	4.1	3.0
	Range in days	1–5	1–15	1–20	1–10
	Number of department reporting	11	19	21	14
Studying problems that arise in supervised farming programs of boys	Average number of days	15.0	29.9	29.6	20.1
	Range in days	2–40	5–115	5–135	5–90
	Number of department reporting	11	18	19	14
Recording productive project records	Average number of days	5.2	6.2	6.4	7.2
	Range in days	1–10	1–15	1–15	1–40
	Number of department reporting	9	17	16	13
Analyzing productive project records	Average number of days	3.0	3.6	3.7	4.5
	Range in days	2–5	1–10	1–10	1–10
	Number of department reporting	11	18	18	13
Evaluating completed productive projects	Average number of days	2.3	3.6	3.6	3.1
	Range in days	1–5	1–13	1–13	1–5
	Number of department reporting	9	17	16	12
Making shop projects that are used in the supervised farming program	Average number of days	36.5	22.5	19.0	19.0
	Range in days	5–100	5–60	5–60	5–60
	Number of department reporting	13	4	5	5

home projects are undertaken where the class work is not related closely to them, such projects are not likely to be successful. Hence the trend is toward the placement of farm crops and animal husbandry in the first year.

The emphasis given to the supervised program in the regular class work is manifested in two ways. One is the length of time spent in the classroom on the different phases of the supervised farming program, and the other, related to the first, is the number of special units, devoted wholly to the supervised practice, which are introduced into the regular work of the class.

The data secured on the amount of class time devoted to the classroom study of the supervised farming practice, by the 24 instructors of the program investigated, are shown in table 9.

Probably the most obvious conclusion to be drawn from table 9 is the great variation which exists in the amount of class time devoted by these 24 instructors to their supervised farming programs. Evidently some of these successful instructors spend only small amounts of their class time in the systematic study of the supervised farm-practice programs of their students, while others devote large proportions of the classroom time to a study of them.

It may be noted that the amount of class time devoted to the study of the farm shop and farm management phases of the supervised farming practices is somewhat less, both in number of class periods expended and in the number of instructors reporting, than that given to farm crops and animal husbandry.

The number of schools in which special units are included in the different agricultural courses for the study of the boys' supervised farming programs, is shown in table 10.

One acquainted with the situation in Iowa would hardly expect to find so many schools devoting special units in the

TABLE 10. NUMBER OF SCHOOLS OFFERING SPECIAL UNITS ON SUPERVISED PRACTICE.

Courses in which special units on supervised farm programs are offered	Number of schools
Animal husbandry	22
Farm crops	21
Farm management	16
Farm shop	13

agricultural courses to the study of supervised farming practice in farm shop and farm management, since, although 21 departments of the 24 investigated were offering courses in these subjects during the year covered by the investigation, home projects in them were not reported as being emphasized.

MEANS OF DEVELOPING AND MAINTAINING THE INTEREST OF THE BOYS IN THEIR SUPERVISED PRACTICE PROGRAMS

It is evident that the classroom activities carried on in connection with the supervised farming programs, as reported in tables 9 and 10, would serve to develop and maintain the interest of the boys in them. That additional means seem to be necessary or advisable, however, is indicated by the list of the means employed by the instructors investigated. These are shown in table 11.

TABLE 11. PRACTICES EMPLOYED BY INSTRUCTORS TO DEVELOP AND MAINTAIN INTEREST IN SUPERVISED PRACTICES.

Practice	Number of instructors employing practice
Conduct project tours	23
Encourage showing at fairs	22
Develop interest in home application in the interest-approach to a unit	22
Use as a basis of promotion in the F. F. A.	20
Publish accounts of projects in local or school paper	19
Give extra school credit for successful completion of a project	13
Arrange project tour for parents	13
Sponsor radio programs to develop interest in projects	9
Display pictures of projects in store windows	8
Display chart in classroom to record the progress of supervised farming programs	7
Encourage hotels and restaurants to serve the prize winning fat animals to advertise project work	2

Table 11 requires no interpretation except, perhaps, to draw attention to the fact that while the number of departments reporting the use of each of the various practices listed is given, the frequency with which they are used by each instructor is not indicated. Two additional means not listed in the table were reported by one instructor each, i.e., the

display of project markers on the home farm, and the encouragement of businessmen and others to visit the projects.

COOPERATIVE ACTIVITIES THAT TIE THE BOYS' INDIVIDUAL PROGRAMS TOGETHER

Cooperative activities as features of the vocational agriculture program in the high schools of Iowa, have been centered most frequently around the production of corn and hogs, and this is true also in the departments investigated. Recently, however, in a number of programs, and particularly in several of the 24 investigated, the production of hybrid seed corn has been undertaken as a cooperative project. The various types of enterprises involved in cooperative activities in the programs covered by this report are listed in table 12.

In an undetermined number of the projects listed in table 12, all of the boys enrolled in the vocational agriculture department were involved, the proceeds from the projects being used to finance some class activity or need. In other cases, however, only a few of the boys worked cooperatively to produce hybrid seed corn for their own home farms.

Group purchases of northern-grown potatoes for seed are being fostered in several schools. These purchases are not confined to the needs of the boys' productive projects but often include enough potatoes to furnish all the seed needed for the total potato crop on the home farms of the boys.

TABLE 12. COOPERATIVE ACTIVITIES RELATED TO THE INDIVIDUAL SUPERVISED FARMING PROGRAMS.

Enterprises	Number of departments practicing		
	Cooperative marketing of project products	Cooperative buying of seed, stock or supplies	Cooperative production of seed stock
Hogs	11	10	10
Hybrid seed corn	6	11	10
Minerals	1	15	0
Potatoes	1	9	1
Dairy cattle	2	4	4
Beef cattle	4	5	0
Sheep	4	3	1
Landscaping plants	0	5	0
Poultry	3	1	0
Fruit trees	0	4	0
Certified oats	0	1	1
Corn	1	0	0
Wool	1	0	0
Popcorn	1	0	0
Protein supplement	0	1	0
Sorghum	0	0	1
Soybeans	0	0	1
Barley	0	0	1

It should also be noted that in several of these 24 departments other types of farm enterprises form the bases of cooperative activities. It is interesting to note that in 5 of the 24 departments the boys have cooperated in buying plants for landscaping purposes.

Another type of cooperative activity reported by 14 departments has to do with the borrowing of the money needed to finance the productive projects. In this type of cooperative activity, the boys pool their needs and resources and are thus enabled to borrow money from the local bank, the Production Credit Association or the credit association of the local Future Farmer chapter, more advantageously than could be done by the average boy acting as an individual. These last-named credit associations are organized chiefly for the purpose of facilitating the obtaining of credit for productive projects.

Still another type of cooperative activity in which local chapters of the Future Farmers of America have participated is a form of group insurance, designed to protect the individual members against losses incurred through the death of their foundation stock, when such losses are not the result of neglect or mismanagement.

THE FARM EXPERIENCE AND BACKGROUND OF THE VOCATIONAL AGRICULTURE INSTRUCTORS IN THE DEPARTMENTS INVESTIGATED

The extent and nature of the farm experience possessed by the instructor of vocational agriculture were investigated as possible factors of importance in the success of supervised farm-practice programs. A summary of the data obtained on this point is presented in table 13.

Because there are no available corresponding data concerning instructors with inferior supervised farming programs, it is impossible to draw any very definite conclusions as to the influence of this particular factor. In order to qualify under the provisions of the national vocational education acts, the teacher of vocational agriculture, under the Iowa plan, must have had at least 2 years of practical farm experience after the age of 14.

That relatively few of the 24 instructors were students of vocational agriculture while in high school might well be

TABLE 13. EXTENT AND NATURE OF FARM EXPERIENCE POSSESSED BY THE INSTRUCTORS OF VOCATIONAL AGRICULTURE IN THE 24 DEPARTMENTS INVESTIGATED.

Nature of farm experience	Number of instructors	Average number of years	Range in years
Place of birth:			
Farm	17	...	...
City	0	...	...
Village	7	...	...
Student of vocational agriculture in high school	7	2.6	1–4
Member of F. F. A.	1	4.0	...
Member of 4-H Club	11	4.2	1–6
Farming experience prior to college entrance	16	2.7	1–14
Farming experience after college graduation:			
Farm manager	2	2.5	2–3
Farm laborer	1	2.0	...
Working on home farm	1	1.0	...
Farmer owner-operator	0	0.0	...
Farm tenant	0	0.0	...
Present farming status of instructor:			
Some investment in farming	18	...	...
Helping to manage farms	8	...	...
Renting farm land	4	...	...
Living on acreage	2	...	...
Living on farm	0	...	...

explained by the fact that this program was inaugurated in 1917 and has not yet become very widespread in the schools of Iowa. In fact, in the school year 1936-37, of the more than 900 high schools in Iowa, only 128 offered courses in vocational agriculture. That only one instructor has been a member of the Future Farmers of America is also of small significance in indicating the value of this organization, since the latter is even now only 10 years old and has not become general until recent years in this state. Only 4 of the 24 instructors lived or worked on farms after graduation from college, while none is living on a farm at present, and only two are living on acreages. It is interesting to note that 75 percent of the instructors investigated have some investment in farming, while 33 percent of them are helping to manage farms.

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